The Status of Piping Plovers in Colorado

Abundance, Productivity, and Recovery Efforts

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Measures of abundance and productivity

- Small population. Inventory all birds, territories and pairs. Closures of all nest sites due to recreational pressure.
- Productivity lower in 1990's, despite better natural habitat. Intervention in 2000's has stabilized and increased population, despite worse habitat conditions.
- Population dropped to one nesting pair statewide in 1996 and 1998, has increased to nine pairs..
- The statewide population may exceed 10 pairs for the first time in 2012.

Piping Plovers Nesting in Colorado 1990-2011

Year	# birds	# of pairs	# of nests	# of eggs	# hatched	% hatched	# fledged	% fledged	# fledged/ pair
1990		8	8	25	12	48%	8	32%	1.00
1991		2	2	8	0	0%	0	0%	0.00
1992		4	7	23	11	48%	6	26%	1.50
1993	13	9	18	64	8	13%	0	0%	0.00
1994		9	16	56	21	38%	13	23%	1.44
1995		5	8	25	0	0%	0	0%	0.00
1996	13	1	3	11	3	27%	3	27%	3.00
1997	14	3	3	12	12	100%	3	25%	1.00
1998	11	1	3	9	0	0%	0	0%	0.00
1999	10	2	4	14	4	29%	4	29%	2.00
2000	13	4	4	16	12	75%	5	31%	1.25
2001	13	5	6	24	9	38%	7	29%	1.40
2002	20	9	9	34	22	65%	16	47%	1.78
2003	25	6	8	32	21	66%	20	63%	3.33
2004	27	9	15	52	22	42%	10	19%	1.11
2005	24	8	9	34	18	53%	9	26%	1.13
2006	20	8	8	32	25	78%	11	34%	1.38
2007	24	8	12	41	19	46%	7	17%	0.88
2008	20	8	14	49	12	24%	4	8%	0.50
2009	20	8	19	63	4	6%	1	2%	0.13
2010	12	6	12	37	7	19%	7	19%	1.17
2011	19	9	10	38	22	58%	15	39%	1.67
TOTAL		132	198	699	264		149		
AVERAGE		**6.00**	**9.00**	**31.78**	**12.00**	**38%**	**6.77**	**21%**	**1.13**

Key habitat features influencing number and distribution of Piping Plovers in Colorado

- Lack of suitable nesting habitat due to vegetative encroachment and persistently low water levels.
- Many Lakes have dried up or shrunk drastically due to drought.
- Kansas wins lawsuit, 40% of Arkansas River spring flow goes to Kansas at their call. Front Range cities have purchased valley irrigation rights, less water in the valley.

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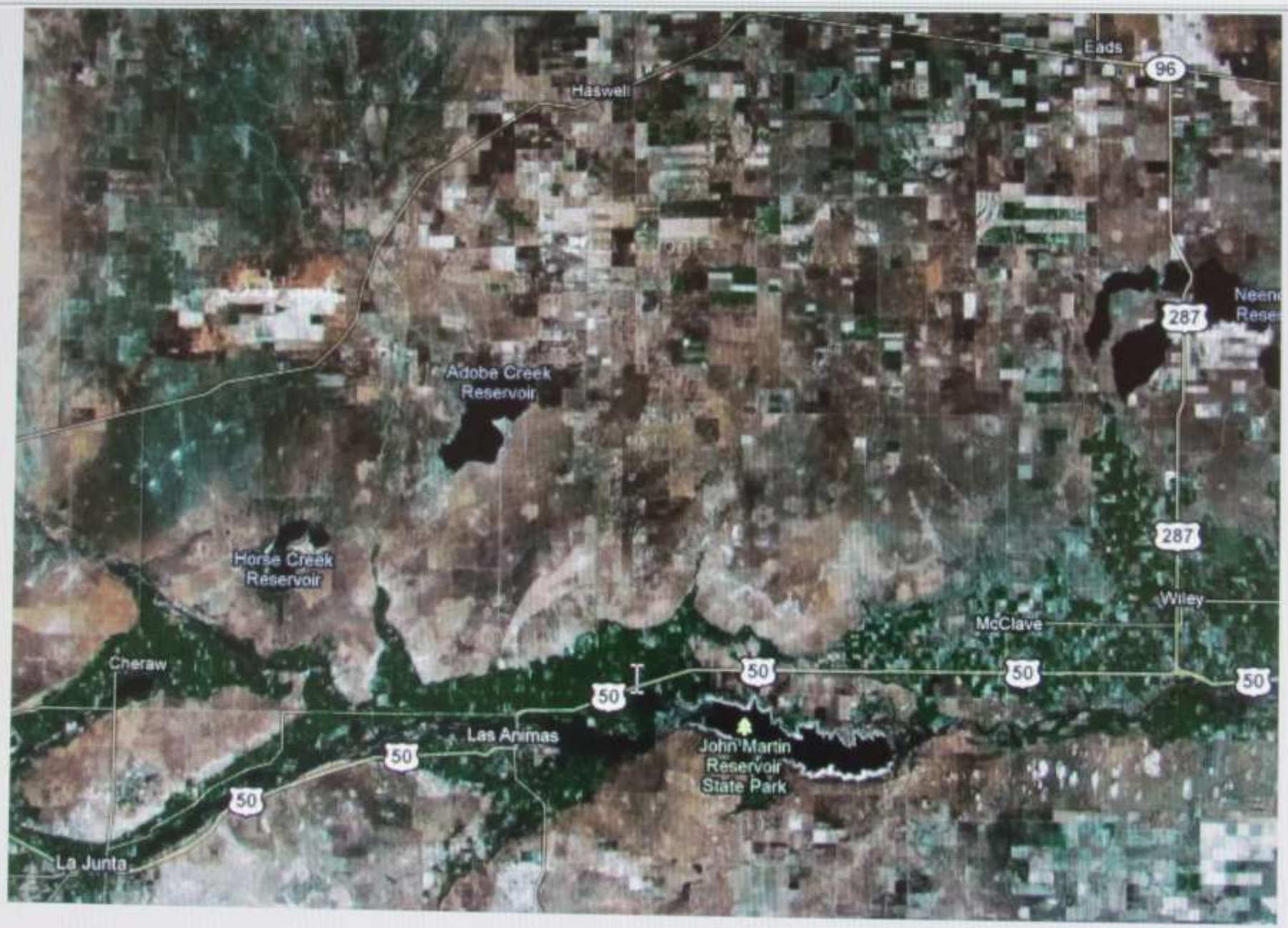


Plover Point
Shale Point
Dinosaur Island
PP10J1
John Martin Reservoir
Pt. #5
ELBERT
LINCOLN
CHEYENNE
KIOWA
CROWLEY
BENT
PROWERS
OTERO
BACA
LAS ANIMAS
0
335
670
1,340 Meters

Habitat John Martin November 2011: Before

Colorado's interaction with greater Great Plains Piping Plover Population

- Two examples (none recent) of Colorado's connection with other Piping Plover populations:
- 1998. In 1998, there was only one female in the Colorado population, and the future looked uncertain when no young hatched or fledged. However, in 1999, two pairs were present. One female with a partial brown neck collar (1st year female?) is an apparent recruit. The pair nests successfully, fledging young.
- 2001: In 2001, a female with colored leg bands nests at Neenoshe Reservoir, fledging one young. Bird traced to Lake Diefenbaker in Saskatchewan, banded by Paul Goossen.

What are the most serious threats to Piping Plovers in Colorado?

- Lack of suitable island habitat.
- Lack of open beach habitat.
- Lakes going dry.
- Nests flooding.
- Vegetation encroachment.
- Depredation: mammals large and small, birds, snakes.

Island Construction, Adobe Creek Reservoir 2003

Island Construction, John Martin Reservoir, 2011

Annual manual and mechanical mainland maintenance, John Martin Reservoir

The desired result, April 2011

Partially cleared, fall 2011. Work project part of National Public Lands Day.

Result of National Public Lands Workday, 2011

Mechanical Disking and dragging, Adobe Creek Reservoir, fall 2011

Tern Island, free of trees and ready for occupation in 2012

Piping Plover, Long Island (1st year breeding female?)

Long Island, Disked and Dragged prior to winter inflow

Control of invasive vegetation

- Application of pesticides. Licensed as a certified pesticide applicator by the Colorado Department of Agriculture.
- Used Garlon IV (Triclopyr) in mid 2000's on saltcedars, Rodeo (Glyphosate) on other vegetation. Currently using Habitat (Imazapyr).
- Trees no longer a problem at critical nest sites.

Predator control

- Predators increase in a low water regime. Mammals, birds and snakes predominated in early years. Rodents invade Point 5 at John Martin, Colorado's most important nest site, and claim many nests. Rodent Control necessary. Apply Bromodiolone pellets inside active rodent burrows. Rodents controlled, coyote and bull snake depredation decreases. Lost no eggs and fledged 11 Piping Plovers as a result.

Kangaroo Rat burrow


INDIVIDUAL RESALE
PLACE PACK
(Pellets)
JUST ONE BITE II
KILLS NORWAY RATS, ROOF RATS, HOUSE MICE AND WARFARIN RESISTANT NORWAY RATS
NORWAY RATS AND HOUSE MICE MAY CONSUME A LETHAL DOSE IN ONE FEEDING WITH FIRST DEAD RODENTS APPEARING FOUR OR FIVE DAYS AFTER FEEDING BEGINS.
ACTIVE INGREDIENT:
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OTHER INGREDIENTS*: 99.995%
TOTAL: 100.000%
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This product has been treated with methoprene to protect the bait from infestation by insects.
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